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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/541,391
Filing Date: July 01, 2005
Appellant(s): MATSUMURA ET AL.

Stephen M. Roylance
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 23, 2008 appealing from the Office action mailed January 25, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Co-pending Application No. 10/540,866

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

The summary of claimed subject matter contained in the brief is deficient. 37 CFR 41.37(c)(1)(v) requires the summary of claimed subject matter to include: (1) a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number, and to the drawing, if any, by reference characters and (2) for each independent claim involved in the appeal **and for each dependent claim argued separately**, every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters. The brief is deficient because dependent claims 2, 3, 5, 8, 9, 6, and 7 which have been argued separately, have not been summarized.

The claimed subject matter for claim 2 is the method of claim 1 wherein the second polymerization is performed at a temperature range of higher than (T-8) and lower than (T+1) **[page 17, lines 19 - 21]**.

The claimed subject matter for claim 3 is the method according to claim 1, wherein the low-density polyethylene-based resin beads have a spherical or cylindrical shape with a length/diameter ratio of 0.6 to 1.6 and an average bead size of 0.2 to 1.5 mm **[page 12, lines 16 – 22]**.

The claimed subject matter for claim 5 is expandable beads obtained by the method of claim 1 **[page 9, lines 10 - 12]**.

The claimed subject matter for claim 8 is pre-expanded beads having a density of 20 to 200 kg/m^3 obtained by pre-expanding the beads of claim 5 **[page 9, lines 10 – 12 and page 18, lines 9 - 12]**.

The claimed subject matter for claim 9 is an expanded molded article having a density of 20 to 200 kg/m^3 obtained by expansion molding the beads of claim 8 **[page 18, lines 9 - 22]**.

The claimed subject matter for claim 6 is pre-expanded beads having a density of 20 to 200 kg/m^3 obtained by pre-expanding the beads of claim 4 **[page 18, lines 9 - 12]**.

The claimed subject matter for claim 8 is an expanded molded article having a density of 20 to 200 kg/m^3 obtained by expansion molding the beads of claim 6 **[page 18, lines 9 - 22]**.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

JP Publication No. 01-284536 to Takamasa et al., when considered with applicant's admitted prior art in the instant specification

6,608,150	WICHER	8-2003
4,368,218	SENDA et al.	1-1983
3,963,816	SMITH et al.	6-1976

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 1-284536 to Takamasa et al. (Patent Family 2668384) in view of US 6,608,150 to Wicher et al.

Regarding claims 1, 2, and 5. Takamasa et al. teach a method for producing expandable particles/beads of a vinyl aromatic-modified (i.e. styrene-modified) polyethylene-based resin (English-language Abstract, Lines 1-3).

In view of the applicants' admitted prior art in the instant specification, Takamasa et al. indicate that the polyethylene used is non-crosslinked linear low-density polyethylene. Furthermore, the composition of the polyethylene-based resin is 100 parts by weight of non-crosslinked linear low-density polyethylene-based resin beads, 5 to 300 parts by weight of a vinyl aromatic monomer (e.g. styrene-based monomer), and 1 to 3 parts by weight of a polymerization initiator relative to 100 parts by weight of the vinyl aromatic monomer. These ingredients are dispersed in an aqueous medium to obtain a dispersion (Instant Specification: Page 2, Lines 21 – 25 and Page 3, Lines 1 – 5). In the English-language abstract, Takamasa et al. state that a suspending agent such may also be dispersed in the aqueous medium (Lines 5 – 8), thereby rendering this aqueous medium a suspension.

The dispersion formed is heated at a temperature such that the vinyl aromatic (e.g. styrene) monomer is infiltrated/impregnated into the polyethylene resin particles/beads but polymerization of the monomer does not substantially occur (English-language Abstract, Lines 9 – 11).

In view of the applicants' admitted prior art in the instant specification, Takamasa et al. use linear low-density polyethylene-based resin beads with a melting point of 122°C (Instant Specification: Page 3, Lines 13 – 15). The polymerization of the vinyl aromatic (e.g. styrene) monomer is performed at a temperature of 115°C. If T °C is the melting point of the low-density polyethylene-based resin beads, this polymerization temperature falls between the range of higher than (T-8) °C and lower than (T+I) °C.

Takamasa et al. do not disclose a second polymerization in their method. However, Wicher et al. teach a step-wise process for polymerizing styrene monomer using two different temperature stages. A polymerizing initiator such as organic peroxide is used in the final polymerization step preferably in an amount from 0.002 to 0.006 equivalents of peroxide initiator per liter of styrene (Column 6, Lines 54 – 59). During the second polymerization, the suspension is heated at a temperature of between 110 and 115°C (see Examples). If T°C is the melting point of the low-density polyethylene-based resin beads, this polymerization temperature falls between the range of higher than (T-15)°C and lower than (T+5)°C and also between the range of higher than (T-8)°C and lower than (T+1)°C. As Takamasa et al. only disclose one polymerization, the total amount of vinyl aromatic (e.g. styrene) monomer used is 5 to 300 parts by weight relative to 100 parts by weight of the low-density polyethylene-based resin beads; however, a second polymerization step taught by Wicher et al. would require the addition of more styrene (see Examples) and one may consequently arrive at the weight range of styrene taught by the applicants. Takamasa et al. and

Wicher et al. are analogous art because they encompass the same field of endeavor, namely the suspension polymerization process of styrene monomer. At the time of invention, it would have been obvious to a person of ordinary skill in the art to include an additional polymerization step in the process described by Takamasa et al. The motivation would have been that an additional polymerization step would be to provide for a more complete polymerization of styrene, thereby reducing monomer content to acceptable levels for commercial processing.

Takamasa et al. disclose that the particles are impregnated with a volatile blowing agent during or after the polymerization (English-language Abstract, Lines 12 – 13).

In view of the applicants' admitted prior art in the instant specification, the resin components of the expandable beads contain a gel component comprising the graft polymer of polystyrene on the polyethylene chain (Page 3, Lines 13 – 25), though the specific what percentage weight of the gel component is comprised by the graft polymer is not disclosed by Takamasa et al. Consequently, the Office realizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredient(s), and process limitation(s). Therefore, the claimed effects and physical properties, i.e. a gel component comprising 2 - 40 wt% of graft polymer, would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 1-284536 to Takamasa et al. (Patent Family 2668384) and US 6,608,150 to Wicher et al., as applied to claim 1 above, and further in view of US 4,368,218 to Senda et al.

Regarding claim 3. Takamasa et al., in view of Wicher et al., teach a method of producing expandable beads as described in claim 1 but do not specify a shape for these beads. However, Senda et al. also teach a method of making expandable thermoplastic polymer beads in which a core of vinyl monomer (e.g. styrene) is surround by a layer of polyolefin (e.g. polyethylene). The expandable thermoplastic polymer beads generally have a spherical or ellipsoidal form/shape and range from 400 to 8000 microns (0.4 to 8.0 mm) in size (Column 4, Lines 30 – 34). Takamasa et al. and Senda et al. are analogous art because they are from the same field of endeavor, namely expandable polyethylene beads. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to form spherically shaped resin beads from the product of the method disclosed by Takamasa et al. The motivation would have been that electing a spherical shape for the resin bead would improve upon its expansion ratio, heat resistance, and mechanical properties.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 1-284536 to Takamasa (Patent Family 2668384) et al. in view of US 6,608,150 to Wicher et al. as applied to claims 1 and 5 above, and further in view of US 3,963,816 to Smith et al.

Regarding claims 8 and 9. Takamasa et al., in view of Wicher et al., teach the expandable beads of styrene-modified linear low-density polyethylene-based resin as indicated in the discussion of Claim 5. In view of the applicants' admitted prior art in the instant specification, an expanded molded article is obtained from the expandable beads (Page 2, Lines 21 – 24). The applicants do not expressly indicate the method by which this expanded molded article is obtained. However, Smith et al. do teach an

expanded molded article derived from pre-expanded beads. These beads are made by pre-expanding expandable beads of polyethylene and/or styrene (Column 3, Lines 1 – 18 and Column 4, Lines 3 – 12). Takamasa et al. and Smith et al. are combinable because they are from the same field of endeavor, namely expandable resin beads containing polyethylene and styrene. At the time of invention, it would have been obvious to person of ordinary skill in the art to pre-expand the resin beads, as taught by Smith et al., to obtain the expanded molded article taught by Takamasa et al. The motivation would have been that pre-expanding the beads allows one to control the density of the final product, which, in this case, is an expanded molded article.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 1-284536 to Takamasa et al. (Patent Family 2668384).

Regarding claim 4. Takamasa et al. disclose expandable beads of a styrene-modified linear low-density polyethylene-based resin, which contain a volatile blowing agent (English-language Abstract, Lines 1- 3 and 12 – 13).

The beads also contain a base resin that is 5 to 300 parts by weight of a vinyl aromatic monomer (e.g. styrene-based monomer) relative to 100 parts by weight of non-crosslinked linear low-density polyethylene-based resin. The amount of styrene-based monomer is consequently not expressly taught Takamasa et al. However, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to optimize the initial amount of styrene monomer to improve the elasticity of the beads. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

In view of the applicants' admitted prior art in the instant specification, the resin components of the expandable beads contain a gel component comprising the graft polymer of polystyrene on the polyethylene chain (Page 3, Lines 13 – 25), though the specific percentage weight of the gel component that comprises the graft polymer is not disclosed by Takamasa et al. Consequently, the Office realizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredient(s), and process limitation(s). Therefore, the claimed effects and physical properties, i.e. a gel component comprising 2-40 wt% of graft polymer, would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 1-284536 to Takamasa et al. (Patent Family 2668384), as applied to claim 4 above, and further in view of US 3,963,816 to Smith et al.

Regarding claims 6 and 7. Takamasa et al. teach the expandable beads of a styrene-modified linear low-density polyethylene-based as described above in claim 4. In view of the applicants' admitted prior art in the instant specification, an expanded molded article is obtained from the expandable beads (Page 2, Lines 21 – 24). The applicants do not expressly indicate the method of pre-expanding the expandable beads to make an expanded molded article. However, Smith et al. do teach an expanded molded article derived from pre-expanded beads. These beads are made by pre-expanding expandable beads of polyethylene and/or styrene (Column 3, Lines 1 – 18

and Column 4, Lines 3 – 12). Takamasa et al. and Smith et al. are combinable because they are from the same field of endeavor, namely expandable resin beads containing polyethylene and styrene. At the time of invention, it would have been obvious to person of ordinary skill in the art to pre-expand the resin beads, as taught by Smith et al., to obtain the expanded molded article taught by Takamasa et al. The motivation would have been that pre-expanding the beads allows one to control the density of the final product, which, in this case, is an expanded molded article.

Claims 1 - 9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4 - 6, 9 – 11, and 14 of copending Application No. 10/540,866. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are obvious variations upon each other. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Regarding claims 1 and 2. Current claims 1 and 2 correspond to claim 1 of Application No. 10/540,866.

Regarding claim 3. Current claim 2 corresponds to claim 4 of Application No. 10/540,866.

Regarding claim 4. Current claim 4 corresponds to claim 5 of Application No. 10/540,866.

Regarding claim 5. Current claim 5 corresponds to claim 6 of Application No. 10/540,866.

Regarding claim 6. Current claim 6 corresponds to claim 9 of Application No. 10/540,866.

Regarding claim 7. Current claim 7 corresponds to claim 10 of Application No. 10/540,866.

Regarding claim 8. Current claim 8 corresponds to claim 11 of Application No. 10/540,866.

Regarding claim 9. Current claim 9 corresponds to claim 14 of Application No. 10/540,866.

(10) Response to Argument

A. Citation of Authority

The Office agrees that the decision set forth in *KSR Int'l Co. v. Teleflex Inc.* provides standards for determining obviousness.

B. Regarding the rejection of claims 1, 2, and 5 under 35 U.S.C. 103(a) as obvious over Takamasa et al. in view of Wicher et al.

1. Appellant's Summary of Rejection of Claims 1, 2, and 5

This section summarizes the rejections of claims 1, 2, and 5 set forth in pages 5 – 9 of the current Examiner's Answer.

2. The teachings of Takamasa et al. and Wicher et al. are combinable

Appellant argues that, though both Takamasa et al. and Wicher et al. teach beads comprising polystyrene, their teachings are not combinable because: 1) Takamasa et al. teach pre-formed beads while Wicher et al. teach beads formed from scratch; 2) Takamasa et al. teach styrene-modified polyethylene beads while Wicher et al. teach polystyrene beads and 3) Wicher et al. teach using a different amount of polymerization initiator than Takamasa et al. However, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*,

642 F.2d 413, 208 USPQ 871 (CCPA 1981). The rejection of Claim 3 did not assert it would have been obvious to use the method of Wicher et al. to produce the *beads* taught by Takamasa et al. or to use the amount of initiator taught by Wicher et al. in the method taught by Takamasa et al. Rather, as both Takamasa et al. and Wicher et al. relate to polymerization of styrene monomers, Wicher et al. was relied upon as it teaches it would have been obvious to carry out the polymerization of styrene monomers taught by Takamasa et al. in two steps. The motivation to do so would have been that the two-step process provides advantages such as isolating the polymer beads and segregating them by size prior to a separate impregnation operation. This, in turn, allows for more precise control of bead size which is critical in some polymer molding operations (Wicher et al.: Column 1, Lines 57 – 60).

3a. A combination of the teachings of Takamasa et al. and Wicher et al. arrives at the claimed method

Appellant argues the instantly claimed amount of styrene monomer, more than 300 parts by weight, is not obvious over Takamasa et al. which teaches 5 to 300 parts by weight. The Office recognizes a person of ordinary skill in the art would not necessarily use a greater amount of styrene monomer when opting to carrying out polymerization of the monomers in two steps instead of one. However, a *prima facie* case of obviousness exists where the claimed ranges and prior art do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (MPEP 2144.05). It could be reasonably expected that two beads prepared by the same process and with the same ingredients, differing only in that one is prepared with 300 parts by weight styrene monomer and the other with slightly more than 300 parts by weight styrene monomer, would have nearly identical properties.

Furthermore, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to optimize the amount of styrene monomer used so that styrene-modified beads with suitable mechanical properties for its intended use could be obtained. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

3b. Wicher et al. teach step-wise addition and polymerization of styrene-based monomer

Appellant argues that the combination of Takamasa et al. and Wicher et al. would not lead to the claimed invention because the claimed method teaches adding styrene monomer, impregnating it into the bead, and then polymerizing it. These three steps are subsequently repeated. Appellant argues that Takamasa et al. teach only a one-step polymerization of the styrene monomer. Appellant also argues that Wicher et al. teach a two-step polymerization process but only teach addition of the styrene monomer once and do not teach impregnation of the styrene monomer into a pre-formed bead.

In response, Wicher et al. do teach step-wise addition of styrene monomer (see Example 4) rather than adding all styrene monomer to be polymerized at the beginning of the process. The second addition of styrene monomer is followed by a second polymerization step. Furthermore, though Wicher et al. do not teach impregnating the styrene monomer into a polyethylene bead, it is submitted that such a step would be obvious to a person of ordinary skill in the art carrying out the process taught by Takamasa et al. with a two-step polymerization of styrene. Dividing the polymerization into two steps in the method taught by Takamasa et al. would necessarily mean

carrying out the process of adding styrene monomer, impregnating it into the bead, and polymerizing it twice. After the first batch of styrene monomer is polymerized and the second batch is added, a person of ordinary skill in the art would be reasonably expected to once again impregnate the styrene monomer into the bead, as taught in the first step by Takamasa et al., so that the styrene-modified polyethylene bead could be formed.

Appellant further argues the method of Takamasa et al. as modified by Wicher et al. would result in the entire styrene-based monomer already being present in the beginning of polymerization. The Office respectfully disagrees. As stated above, Wicher et al. do teach step-wise addition of styrene monomer (see Example 4) rather than adding all styrene monomer to be polymerized at the beginning of the process. Modifying the method of Takamasa et al. according to Wicher et al. would thus call for the addition of styrene monomer in two steps.

3c. Temperature rate and conversion in the first polymerization

Appellant argues that the limitation that additional styrene-based monomer is added when a conversion ratio of polymerization reaches 80 to 99.9% is not met by Wicher et al. Appellant indicates that Example 4 is not in accordance with the method recited in Claim 1 because there is no second polymerization after the second addition of styrene monomer.

While the polymerization initiators are present from the beginning of the polymerization, they are activated at different temperatures. In Example 4 of the Wicher et al. disclosure, dibenzyol peroxide (BPO), t-butyl peroxy-2-methylpropanoate (TBPMP), and 1,1,3,3-tetramethylbutyl peroxyacetate (TOPA) are added to the styrene monomer mixture. The mixture is then heated at 90°C for six hours (Column 9, Lines 27 – 36). Importantly, TOPA has a one hour half-life temperature is from 101° to 111°C, a one hour half-life temperature that is 7 to 17°C higher than that of BPO (Column 5,

Lines 9 – 22). BPO is also indicated to have a percent conversion of styrene of 82.8% in six hours (Table I in Column 8). After the mixture in Example 4 is heated at 90°C for six hours, the mixture is then heated for two hours at 110°C to 112°C (Column 9, Lines 27 – 36). Again, TOPA has a one hour half-life temperature of from 101° to 111°C and TPMP has a one hour half-life that is about 5 to 10°C below this (Column 5, Lines 9 – 56).

Appellant further argues the temperature carried out by Wicher et al. is 24°C lower than the temperature recited in claim 1. However, it was not suggested the temperature taught by Wicher et al. be substituted for the taught by Takamasa et al. The teachings of Wicher et al. are relied upon as they disclose a two-step polymerization of styrene monomers.

4. Claims 2 and 5

Appellant argues that, because claims 2 and 5 depend from claim 1, they are not obvious in view of the previous arguments. As indicated above, it is the Office's position that the method of claim 1 is obvious in view of Takamasa et al. and Wicher et al. Thus, the rejections of claims 2 and 5 under 35 U.S.C. 103(a) are also maintained.

C. Regarding the rejection of claim 3 under 35 U.S.C. 103(a) as obvious over Takamasa et al. in view of Wicher et al. and Senda et al.

Appellant argues that, because claim 3 depends from claim 1, it is not obvious in view of the previous arguments. As indicated above, it is the Office's position that the method of claim 1 is obvious in view of Takamasa et al. and Wicher et al. Thus, the rejection of claim 3 under 35 U.S.C. 103(a) is also maintained.

D. Regarding the rejection of claims 8 and 9 under 35 U.S.C. 103(a) as obvious over Takamasa et al. in view of Wicher et al. and Smith

Appellant argues that, because claims 8 and 9 depend from claim 1, they are not obvious in view of the previous arguments. As indicated above, it is the Office's

position that the method of claim 1 is obvious in view of Takamasa et al. and Wicher et al. Thus, the rejections of claims 8 and 9 under 35 U.S.C. 103(a) are also maintained.

E. Regarding the rejection of claim 4 under 35 U.S.C. 103(a) as obvious over Takamasa et al.

Appellant argues the instantly claimed amount of styrene monomer, more than 300 parts by weight, is not obvious over Takamasa et al. which teaches 5 to 300 parts by weight. However, a *prima facie* case of obviousness exists where the claimed ranges and prior art do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner,* 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (MPEP 2144.05). It could be reasonably expected that two beads prepared by the same process and with the same ingredients, differing only in that one is prepared with 300 parts by weight styrene monomer and the other with slightly more than 300 parts by weight styrene monomer, would have nearly identical properties.

Furthermore, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller,* 105 USPQ 233. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to optimize the amount of styrene monomer used so that styrene-modified beads with suitable mechanical properties for its intended use could be obtained. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney,* 205 USPQ 215.

F. Regarding the rejection of claims 6 and 7 under 35 U.S.C. 103(a) as obvious over Takamasa et al. in view of Smith

Appellant argues that, because claims 6 and 7 depend from claim 4, they are not obvious in view of the previous arguments. As indicated above, it is the Office's position that the method of claim 4 is obvious in view of Takamasa et al. and Wicher et al. Thus, the rejections of claims 6 and 7 under 35 U.S.C. 103(a) are also maintained.

G. Regarding the rejection of claims 1 - 9 on the ground of nonstatutory obviousness-type double patenting over claims 1, 4 – 6, 9 – 11, and 14 of Application No. 10/540,866

1. Appellant's summary of obviousness-type rejection of Claims 1 - 9

This section summarizes the rejections of claims 1 – 9 set forth in pages 14 and 15 of the current Examiner's Answer. Regarding applicant's statement that no indication has been made regarding why the claims in the conflicting applications are obvious variations upon each other, the Office did set forth rationale for this determination (see page 14, first paragraph of the current Examiner's Answer).

2. The instant claims 1 – 16 and claims 1, 4 – 6, 9 – 11, and 14 of Application No. 10/540,866 are obvious variations upon each other

Appellant argues the instant claims and claims of Application No. 10/540,866 are not obvious variations upon each other because they disclose different polymerization temperatures and gel contents. However, both ends of the polymerization temperature range of higher than T-8 to lower than T+1 disclosed in the instant claims are remarkably close to the upper end of the first range (T-8) in Application No. 10/540,866 and the lower end of the second range (T+1) in Application No. 10/540,866. The lower end of the claimed gel content in the instant claims (2 wt.%) is also very close to the gel content of less than 2 wt.% claimed in Application No. 10/540,866. As indicated in the rejection above, the claimed methods and products thus appear to be modifications of each other derived from routine experimentation and optimization, such as in the case

of the closely related polymerization temperature ranges indicated in either set of claims. Processing conditions, such as temperature, are routinely adjusted for reasons such as enhancing speed or reducing cost.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Melissa Winkler/

Examiner, Art Unit 1796

Conferees:

/Mark Eashoo/

Supervisory Patent Examiner, Art Unit 1796

/James J. Seidleck/

Supervisory Patent Examiner, Art Unit 1796